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(12) UK Patent (19) GB (11) 2 342 601 (13) B

(54) Title of Invention

Masking tape

(51) INT CL⁷: B05B 15/04

(21) Application No
0001389.6

(22) Date of filing
08.09.1998

(30) Priority Data

(31) 9719091
9726724
9805059
9814477

(32) 10.09.1997
19.12.1997
11.03.1998
04.07.1998

(33) GB

(86) International Application Data
PCT/GB98/02706
En 08.09.1998

(87) International Publication Data
WO99/12554
En 18.03.1999

(43) Application published
19.04.2000

(45) Patent published
27.09.2000

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(52) Domestic classification
(Edition R)
B2L LCVA
U1S S1820 S1855

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(continued on next page)

GB 2 342 601 B - continuation

(58) **Field of search**

As for published application 2342601 A *viz:*
updated as appropriate

Additional Fields
INT CL[6] B05B

WO 99/12654 PCT/GB98/02706

2342601

~~1/6~~ 1/1

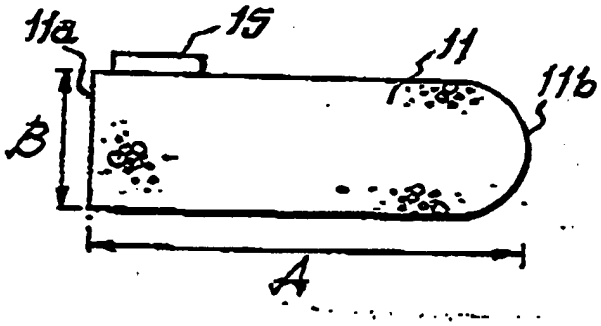

FIG.1

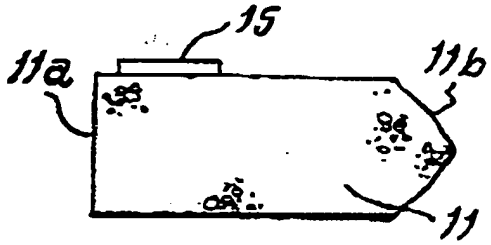

FIG.2

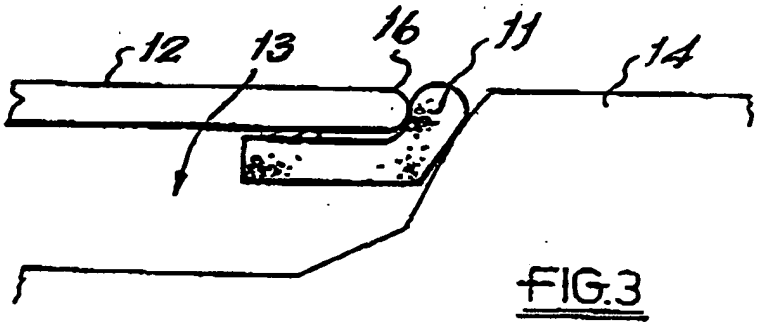

FIG.3

 2 342 601

MASKING TAPE

This invention relates to masking tape for use in spraying automobile doors and the like openings to prevent penetration of spray through the - as yet - unsealed gap between door (or other opening member, such as sun roof) and surround.

Masking tapes for such use are known in various forms made of foam material such for example as polythene, polyester, neoprene and the like. GB 885 660 discloses strip on tape of square cross-section, which is compressed and then fitted into channels provided for subsequent fitting of weather sealing strip. EP 0 365 510 discloses strip of rectangular cross-section as well as strip of circular cross-section with adhesive on one face of the rectangular section embodiment and covering one side of the circular section embodiment.

Widely used are strips which are essentially ribbon-like which are readily folded or bent into a C-cross-section. These ribbon-like tapes have adhesive on one side for attachment to the fixed structure.

Despite the continued development of these masking tapes, problems are experienced in use. For one thing, they need to be applied carefully so as to be correctly positioned. Often, mispositioning is not apparent until the door or other member has been closed and - worse - maybe not even then. Exposed adhesive, for another, prevents absorption and paint builds up which hardens into an edge that has to be rubbed down.

The present invention provides masking foam tapes which do not suffer from these problems.

The invention comprises a masking foam tape used in spraying automobile doors and like openings to prevent penetration of spray through the unsealed

gap between door and door surround, having an elongate substantially rectangular section having major dimension at least twice but not more than four times its minor dimension and having at one end of its elongate section adhesive for attachment at the opening and being tapered and free of adhesive at the other end thereof, and being attached by its adhesive around the inner edge of the door so as to project, by its adhesive-free tapered edge, around the door beyond the rim thereof, the projecting part being between door and surround when the door is closed.

Particular embodiments of the invention are those substantially as described herein with reference to Figure 3 of the accompanying drawings.

The adhesive may be only on one face of the tape having the major dimension.

The tapered end may be rounded or faceted, and may be made by extrusion through an appropriately shaped die or by crush cutting and thereby cold welding so as to make two tapes out of a single wider tape, each with a cold welded, rounded edge.

The tapered end may be on a lateral projection, which may be, in length, substantially the same as the minor dimension of the substantially rectangular section.

The tape may have adhesive on one face only, the lateral projection being from that face.

The lateral projection may be necked.

The tape may have adhesive on one face only, and lateral projections from both faces.

The tape may have its substantially rectangular section slightly tapered towards its adhesive end so as to have (except for its adhesive-free, tapered end) a slightly trapezoidal section.

A tape, even without a lateral projection, may be necked at its tapered adhesive-free end.

Conventionally, automobile doors, when sprayed *in situ* in the door surround, are masked by a self-adhesive foam masking strip or tape which is adhered around the surround, the door being then closed on it to trap the strip so as to prevent ingress of spray paint into the automobile interior. If two coats - primer and top coat - are to be applied, best practice requires that the mask be peeled off and any hard edges of primer rubbed down before re-masking and top coat application. A problem arises, when primer and top coats are being applied, in that on surfaces within the gap between the edge of the door and the surround, the area covered by the primer is not necessarily the same as that covered by the top coat, which leaves an untidy appearance.

As the tapered edge of the tape, which is effectively the sealing portion thereof being, when closed on, trapped between the surround and the door or other member rim, has no adhesive, it can readily be adjusted - the trapping action leaving scope for manual adjustment where the foam might project too far out of the gap, or not far enough. Moreover, the whole exposed surface is absorbent and causes no hard edge formation, saving a rubbing-down operation which is time consuming.

Embodiments of foam products comprising masking foam tapes and methods for masking using the same will now be described with reference to the accompanying drawings, in which:-

Figure 1 is a cross section of one embodiment;

Figure 2 is a cross-section of another embodiment; and

Figure 3 is a diagrammatic section showing a tape according to Figure 1 in position between a door and a door post of an automobile.

Figures 1 to 3 illustrate a masking foam tape 11 adapted for use in spraying automobile doors 12 and like openings to prevent penetration of spray through he unsealed gap 13 between door 12 and door surround (post 14, Figure 3). The tapes 11 have elongate substantially rectangular sections having major dimension A at least twice but not more than four times its minor dimension B and having at one end 11a of its elongate section adhesive 15 for attachment at the opening and being tapered and free of adhesive at the other end 11b thereof.

Typical values for A and B are 25mm and 10mm respectfully.

The adhesive 15 is confined to a thin strip along one face of the tape 11 having the major dimension A. The strip may be, say, 2mm in from the edge and some 8mm wide.

The tapered and in Figure 1 is rounded, in Figure 2, faceted - generally, the cross-section is that of a bullet.

Figure 3, shows how the tape 11 of Figure 1 (Figure 2 would be the same) is applied by attaching it by its adhesive strip 15 around the inner edge 16 of the door 12 so as to project, by its adhesive-free tapered edge 11b, around the door 12 beyond the rim thereof and closing the door 12 to position the projecting part between door 12 and surround 14.

As there is no adhesive in the region where the foam is trapped, any mispositioning may be readily adjusted by manually or perhaps automatically re-positioning the tape - modest finger pressure suffices, but, of course, a robotic mechanism could be trained to do this.

With the dimensions quoted, no difficulty is experienced in bending the strip to conform to a corner.

CLAIMS

1. A masking foam tape used in spraying automobile doors and like openings to prevent penetration of spray through the unsealed gap between door and door surround, having an elongate substantially rectangular section having major dimension at least twice but not more than four times its minor dimension and having at one end of its elongate section adhesive for attachment at the opening and being tapered and free of adhesive at the other end thereof, and being attached by its adhesive around the inner edge of the door so as to project, by its adhesive-free tapered edge, around the door beyond the rim thereof, the projecting part being between door and surround when the door is closed.

2. A masking foam tape used in spraying automobile doors and like openings to prevent penetration of spray through the unsealed gap between door and door surround according to claim 1, substantially as described with reference to Figure 3 of the accompanying drawings.